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CASES OF UTERINE FIBROIDS TREATED BY ELECTROLYSIS.

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OF the very large number of abdominal tumors that have come under my observation during the past twenty years, it is safe to say that, at least, seventy-five or eighty per cent. of them have been clearly diagnosticated as fibroid growths connected with the uterus.

In most instances, the subjects of these tumors have sought my advice under the impression that they were suffering from ovarian disease, and that relief was to be obtained only by some surgical operation. Instead, however, of advising any form of treatment that necessarily implied a greater or less risk of life, it has been my usual habit to advise rather that the disease should be allowed to take its own natural course, assuring the patient, at the same time, that her malady was not in itself dangerous; that sometimes, even, it disappeared of its own accord; moreover, that its presence was, in a large proportion of cases, quite consistent with a long and even a tolerably comfortable life.

As regards the treatment of such cases by intra-uterine section, after the manner recommended and practised some years since by Dr. Atlee, of Philadelphia, I am persuaded the procedure is one that cannot be safely adopted, except in a very limited number of cases; such, for example, as where the fibroids are comparatively small and well projected into the uterine cavity. In such instances, this enucleating process may oftentimes be practised with safety and good result. In a majority of instances, however, these fibroid growths are found to be interstitial or sub-peritoneal; under such circumstances, the operation referred to can scarcely prove otherwise than fatal.

The more severe and dangerous operation of extirpating the entire uterus is now almost universally regarded, except in extremely rare instances, as not merely inexpedient, but absolutely unjustifiable. Such operations have generally been the result of erroneous diagnosis; and nineteen twentieths of them, I have every reason to believe, have proved fatal.

Koeberle, of Strasbourg, and Péan, of Paris, have been comparatively successful in this line of surgery, and yet the favorable record

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of even these eminently skilful surgeons will hardly commend the deliberate extirpation of a fibroid uterus as an ordinarily justifiable procedure.

Of the nine cases of uterine extirpation in my own practice, three only have been followed by recovery. Of these three, two were cases where the operation was performed with a clear recognition of the disease; the third operation was consequent upon an error of diagnosis. Of the six fatal cases, one was wrongly diagnosed; the remaining five occurred in connection with ovariotomy, where the diseased ovary and uterus were found inseparably connected.

Setting aside, then, as inexpedient, and even unjustifiable, the several plans of treatment above referred to, to wit, intra-uterine section and the still more formidable operation of removal of the entire uterus, a still further question remains to be answered. Is there any other form of treatment, local or constitutional, that may be relied on as possessing any remedial efficiency either for arresting the growth or promoting the disappearance of uterine fibroids?

Answering for myself, after a pretty ample experience of a score or more of years, I am bound to say that I can call to mind but a single instance where any plan of purely medical treatment, constitutional or local, has been followed by any obviously favorable result. In one instance, the long-continued use of the iodide of potassium injected into the uterine cavity was followed by a gradual diminution, and final disappearance of a very large fibroid tumor of the uterus. The same remedy, since tried repeatedly, in a similar manner, and under apparently similar circumstances, has, in every instance, entirely failed.

Not content that a disease of so frequent occurrence and of so grave a character should be regarded as absolutely and forever beyond the reach of remedial treatment, and thus be allowed to take its place among the opprobria of the profession, I resolved to make trial of another remedy which, though, at present, of comparatively limited application, is likely, I believe, to prove itself, sooner or later, a therapeutic agent of great value. I allude to electrolysis. For the practical carrying out of this mode of treatment, I am largely indebted to my friend, Dr. Ephraim Cutter, of Woburn.

Diagnosis.—Ordinarily, the characteristics of uterine fibroids are sufficiently marked to allow of little difficulty in determining their true nature. It cannot be denied, however, that cases are now and then met with where even the most skilful and adroit diagnostician may become greatly embarrassed, and even led seriously to doubt whether the disease he is dealing with belongs to the uterus or to some other organ. In this connection, I can, perhaps, do no better than to quote from Prof. Koeberle, of Strasbourg: "The diagnosis of fibrous tumors of the uterus, interstitial and sub-peritoneal especially, oftentimes presents great difficulties, and has given occasion to numerous mistakes. They are particularly liable to be confound-

ed with ovarian tumors. It is in connection with such an error, no doubt, that most of the operations of uterine extirpation have been undertaken.

"Reciprocally, ovarian tumors have sometimes been taken for uterine fibroids, and these latter, again, for normal or extra-uterine pregnancy, dermoid or hydatid cysts, retro-uterine haematocele, cancerous tumors, &c. Differential diagnosis, in sharply defined cases, is simple and easy; but, in cases less marked, it is oftentimes extremely difficult, on account of symptoms common to this as well as to other forms of disease."

Without pretending to establish minutely the differential diagnosis of the various forms of disease that are liable to be confounded with uterine fibroids, Prof. Koeberle further remarks that "mistakes may generally be avoided by making a careful estimate of all the elements of diagnosis—the age of the patient, the progress of the disease, the circumstances connected with its first appearance—the form of the tumor, its consistence, the form of the neck of the womb, and the condition of menstruation; also the signs furnished by symptoms, local and subjective, particularly the touch, auscultation, percussion, shock, ballottement, exploration by trocar, uterine sound, &c. It is well not to lose sight of the fact that the different affections above mentioned are liable to complicate each other; that there may exist, simultaneously, both ovarian cyst and uterine fibroids; that the condition of pregnancy is quite possible in either condition; indeed, that it is sometimes absolutely impossible to establish with positive certainty the diagnostic difference between a compact or multilocular tumor of the ovary and a fibroid disease of the uterus.

"The softness and sense of fluctuation, which certain fibrous tumors present, tend, especially, to lead one into a mistake. When their growth has been slow, they are usually of firm consistency, sometimes quite hard. At other times, they are very unequal in this respect, and present several points where fluctuation is more or less evident. This condition is observed particularly where the tumor is soft and flaccid, a state of things which occurs, ordinarily, when the disease has taken on a rapid increase, and attains a large volume. Secondly, when it is very vascular. Thirdly, when it contains liquid collections, formed by mucous cysts, by serous infiltrations, or by deposits of blood or pus."

In the application of electrolysis to the treatment of fibroids of the uterus, I have never thought it essential to know with certainty what particular portion of the organ the disease occupied. My chief concern has been, rather, to be well assured as to the actual *nature* of the disease; also that the fibrous growth was so situated that it could be readily and safely penetrated by the electrodes.

Generally, I have found it most convenient to attack the disease through the abdominal walls. In some instances, however, where

the fibroid growth had projected itself downward so as to involve a portion, or, as it sometimes does, the whole of the neck of the uterus, I have made the attack through the vagina, thrusting one electrode into the tumor in that direction, and the other into the upper part through the abdominal parieties.

As yet, I have seen no ill effects, local or constitutional, following this operation. For some hours after, the patient suffers considerable pain through the pelvic region, also some feverish excitement, as denoted by a quickened pulse, thirst, and increased sensibility in the direction of the tumor. These symptoms, however, are not lasting, and in a day or two the patient declares herself entirely free from suffering of every kind.

The apparatus I have thus far employed was furnished by Dr. Cutter. Its construction is, in some respects, peculiar; but in its use I have found it admirably adapted to the purpose for which it was intended. The trial of it in several of my first cases was chiefly under Dr. Cutter's direction. It consisted of a battery of zinc and carbon plates of about thirteen and a half square feet of surface —simple, yet very effective. The plates were strung on rods of hard rubber, and separated from each other by washers of the same material, the whole tightened by nuts; a handle of hard rubber sprung from the top. The cell was made of sheet lead, covered by a rattan basket. The exciting fluid consisted of a saturated solution of bichromate of potassa, acidulated with sulphuric acid. The conductors were of copper. The electrodes will be described further on.

It seems proper to remark in this connection that a battery of such power as the one just described should be operated with great care, and only by one fully comprehending its proper working.

In regard to the *modus operandi* of electrolysis in bringing about the diminution in size, or the absolute disappearance, of a fibroid growth, I have, as yet, no satisfactory answer to give. It is well understood that these growths are composed of a very loose and feebly organized tissue, and possess but a low degree of vitality; consequently, they tolerate local interference badly. This truth I have seen illustrated in two well-marked cases, where the surgeon, after having begun an operation for the removal of an ovarian cyst, very soon found himself attempting to dislodge a large, fibroid uterus. The operations were not completed in either case, and the patients recovered. Immediately following the recovery, however, the fibroid growths began sensibly to diminish in size, and ultimately they disappeared altogether. So, as regards the disease in question, may not the shock from a powerful galvanic battery, communicated directly to the loose and imperfectly organized tissue of a fibroid, so far interrupt, or interfere with, its nutrition as not only to arrest further development, but eventually to effect its removal altogether?

CASE I.—Having procured, from Dr. D. F. Lincoln, a set of elec-

trolysis needles, prepared under his direction, I selected two of the longest, six inches in length, and about one sixteenth of an inch in diameter, cylindrical, tipped with platinum, and tapered to a point like a common sewing needle. The battery was furnished by Dr. Cutter, and with special reference to the purpose in view. Thus provided with what seemed to be, in all respects, a complete apparatus, I proceeded to make my first trial of it in the case of Mrs. T., of Springfield, Mass. It is proper, first, to state that I had been previously sent for to see this case, in the expectation that I should find an ovarian tumor. I found, instead, however, a large, fibroid tumor of the uterus, of several years' growth, very hard, irregular, filling the pelvic cavity, and rising up into the abdomen to an extent indicating a seven months' pregnancy. Every symptom, local and general, declared, beyond all doubt, the true nature of the disease. There had been frequent haemorrhages, and, consequently, marked anaemia, and great prostration. The tumor had been rapidly increasing, and the suffering from distention had now become almost unbearable.

Being informed of the true nature of her disease, and that it was not of a character that, in my judgment, properly admitted of any such operation as she had anticipated, the patient was quite ready, and even anxious, to submit to any other form of treatment I might suggest. The plan of electrolysis was then fully explained, and in pursuance of arrangements then made, she soon after came to Lowell, and submitted to the first trial of the battery, the 26th of December, 1871.

No anaesthetic was used. The electrodes were plunged into the most prominent part of the tumor, passing through the abdominal walls on either side of the median line, about six inches apart, and in a downward and inward direction. They entered the tumor with great difficulty, and became so twisted and bent in the effort that the fibrous structure was penetrated not more than three-fourths of an inch.

In this respect, the operation was not at all satisfactory, inasmuch as it was intended that the electrodes should penetrate the tumor to the depth of at least three or four inches. Connections were made between the battery and electrodes, and the unbroken galvanic current maintained continuously for seven minutes. During this time, the pulse changed materially, as regards frequency. At first, it was not disturbed; very soon, it rose to 120, and was not so full as natural. The face became pale and somewhat pinched; a cold sweat covered the forehead; hands and feet, forearms and legs were pale and cold. The patient, all the while, uttered expressions of much suffering. Finding the impression so very profound, we desisted from further continuance of it, lest serious harm might ensue. The connections were broken, and the electrodes withdrawn. The operation was followed by considerable pros-

tration, and a pretty sharp pain through the abdomen. The prostration was met by stimulants, and the pain by subcutaneous injections of morphia, and hot fomentations to the abdomen. The patient gradually rallied from the prostration, and the pain subsided in the course of twenty-four hours. A sense of soreness, through the region of the tumor, continued for several days.

Jan. 1st, 1872, the operation was repeated in the same manner, and with very similar results, as to prostration and local suffering. For the six weeks following this second and last operation, the patient remained under my daily observation. During this period, I noticed no special change as regards the tumor; certainly, no increase in size appeared, a fact of great significance, considering that, for weeks previous to submitting to the first application of galvanism, the growth was rapidly advancing and causing great suffering from distention.

Defective and unsatisfactory as were the experiments in this case, owing to the imperfect construction of the electrodes, the effect upon the general condition of the patient proved, on the whole, very gratifying. Within three weeks from the first trial of the battery, there began to be a manifest improvement in health. Besides the return of appetite and strength, there was a consciousness of an arrest of the growth of the tumor. The moral effect of this last named fact was to remove a depressed state of mind that had hitherto been one of the most important features of the case.

Being satisfied that electrolysis had not been fairly tested in the foregoing case, I determined that, before making further trial of it, I would provide myself with better and differently constructed electrodes. With this view, I applied again to my friend, Dr. Cutter, whose tact and ingenuity I was sure was quite equal to furnishing all that could be desired.

The first electrode he produced was made after the fashion of a common corkscrew. This looked promising enough, but proved, upon trial, to be perfectly worthless. The doctor then produced another instrument, made almost precisely in the form of a surgeon's grooved director, with sharp point and edges, and an ebony handle at the proximal end. Provided with this newly devised instrument, I expected to be able to penetrate the fibroid tissue to any depth I desired, however dense and unyielding it might be. Moreover, from its possessing so much larger surface, I should be likely to get a greatly increased electrolytic action. In both these respects, I have not been disappointed. I can justly recommend the instrument as decidedly superior to any other I have yet seen.

CASE II.—Early last March, Mrs. T., of Hubbardston, a widow lady, 40 years of age, married nine years since, but without children, called upon me to get my opinion and advice in regard to a large tumor in the abdomen. On examination, I found the disease to be a uterine fibroid, very dense, somewhat irregular, almost completely

filling the pelvis and extending upward into the abdomen as far as the umbilicus. The neck of the uterus was also involved, and the disease in this direction had projected itself several inches into the vagina. The general health of the patient had become much impaired, and she was suffering greatly in many ways, but especially from constant dyspncea, and inability to get any rest, except in a semi-recumbent position, or by sitting upright in a chair. There was more or less peritoneal effusion; also anasarca of the lower limbs. Although the case was unpromising, after explaining its difficulties, and the slight prospect of getting any relief from any form of medical or surgical treatment, I suggested that, *possibly*, some benefit might be gained from galvanism. The proposition was cheerfully accepted, and no time was lost in carrying it into effect.

The first experiment with the battery was made the 26th of March, ult., under the direction of Dr. Cutter. His newly constructed electrodes were then used for the first time. The plan of procedure was precisely the same as that described in the first case, except that, in the present instance, the electrodes were made to penetrate the tumor to the depth of four inches instead of less than a single inch, as before. The current was continued about five minutes. During this time, the local suffering was quite severe, and lasted several hours after the electrodes had been withdrawn. The pulse, meantime, fell from 100 to 60 per minute; the skin became cool, but there was no severe prostration, as in the former case. Considerable reaction followed, but it subsided entirely in the course of twenty-four hours.

The immediate effects of this operation were quite remarkable. During the first twelve hours, the urinary secretion was more than quadrupled in quantity; at first turbid, it soon became clear and light colored. In connection with this change, the dropsical condition began immediately to subside, and in less than a week it had disappeared altogether.

But the most striking effect of the operation was the almost instantaneous and perfect relief from dyspncea. For the first time in many months, she was now permitted to lie down in bed, and enjoy rest and sleep equal to that of the healthiest period of her life.

As soon as the pain and soreness had fully subsided, the patient was subjected to a second trial of the battery. This time, the tumor was attacked in a different manner. One electrode was thrust into the disease through the abdominal walls, about four inches, and about two inches from where it entered at the previous operation; the other electrode was made to penetrate the tumor per vaginam. In this direction, it entered about three inches. The connections were then made, and the current continued about four minutes.

No specially marked effects followed this operation, save some pain in the direction of the tumor, somewhat severe at first but subsiding in the course of a few hours.

The third and last operation was done about two weeks after the second, but with no special difference as to results.

This patient was under my charge six weeks. During all this time, her general condition was greatly improved. The more special evidence of this fact was seen in the complete and continued relief from a most distressing dyspnoea, and at the same time in the ability to lie down and sleep comfortably in her bed. Her appetite and strength returned in a great degree; the peritoneal effusion and anasarca passed away; and the suffering from abdominal distention became scarcely noticeable. The tumor itself became sensibly diminished in size, at least two and a half inches, as determined by careful measurement with a tape passed round the body over the most prominent portion of the tumor.

Upon my departure for Europe, the 1st of May, the galvanic treatment was discontinued, and the patient returned to her home. Soon after, as I have since been informed, her improved condition, so recently giving promise of a permanent relief (possibly an ultimate cure), began gradually to give way to a return of all her previous bad symptoms. In defiance of medical treatment, her condition soon grew rapidly worse, till, finally, she was relieved by death, about the middle of July, some six weeks from the time I last saw her.

In calculating the merits of electrolysis as a remedial or curative agent, I am not disposed to make more of this case than it really deserves. I can only regret that the treatment which, during the period of six weeks, had produced such marked and satisfactory results, could not have been longer continued. There were complications in the case, and it is not quite certain whether they were incidental to, or independent of, the uterine disease. However this may be, it was, certainly, an important and interesting fact that they were completely relieved for a time, through the influence of galvanic action. As regards what might have been the result of a longer continued application of this same agency, it is, of course, a matter of mere conjecture. But, allowing the case to have been absolutely beyond the reach of cure by any known remedy, the power of galvanism in affording such relief from suffering as shown in this particular instance furnishes sufficient reason for regarding it as something better than a therapeutic agent of a merely fancied value.

CASE III.—About the middle of last April, I was called to see Miss F., of Haverhill, a maiden lady, 34 years of age. I found her suffering from a large uterine fibroid of some two or three years' growth. It was hard, globular, movable. She was very feeble and anaemic from frequent and profuse haemorrhages. The recent increase in the size of the tumor, together with various symptoms of local and constitutional suffering, suggested the necessity of some speedy and effectual relief.

Seeing no occasion for surgical treatment, I proposed the trial of

electrolysis. The proposition was accepted at once. A few days after, the 22d of April, galvanism was applied, Drs. Cutter and Chase assisting. Chloroform was given, and the electrodes were passed through the parieties of the abdomen on either side, penetrating the tumor about three inches, with ease. The current was continued three minutes, with an effect seemingly less profound than in the previous cases, where no anæsthetic was used. There was no expression of suffering of any kind on coming out from the effect of the chloroform. For the week following, this case presented no new or specially marked symptoms. Evidently, no harm had been done.

On account of my absence, and Dr. Cutter being in a distant part of the country, this patient was not approached again for treatment till the latter part of June. During this time, however, she seems to have made favorable progress; her health, generally, was improved, and the tumor had manifestly diminished somewhat in size.

Assisted by Drs. Cogswell, of Bradford, and Nichols, of Haverhill, Dr. Cutter made the second application of galvanism, the 22d of June. Electrodes were introduced as on the previous occasion, and the current was continued five minutes. The pulse was somewhat quickened; the hands, arms and legs rather cool; but slight prostration followed. Next day, the patient was very comfortable, and made no complaint of suffering of any kind.

August 22d.—Galvanism was again repeated by Dr. Cutter, assisted by Drs. Chase and Nichols. The process was in all respects the same as before. General improvement had gone steadily on up to this time. The tumor also had gradually diminished.

Such was the state of things on my arrival home from Europe, the 1st of September. About the first of October, the patient called on me at Lowell, in order that I might the better judge of her actual condition by personal inquiry and examination. The result of the interview was most gratifying. It appeared that, from the day of the first experiment with the battery up to the present time, there had been a regular improvement in every particular, but more especially in regard to the local malady. The tumor which, only six months before, I had seen occupying a large portion of the pelvic cavity, and extending quite up to the umbilicus, and not less than eight or nine inches in diameter, had now so far disappeared that what remained of it could scarcely be felt. Its final disappearance altogether can now hardly be questioned, and with this event, it is reasonable to calculate, recovery will ultimately be complete in all respects. In this instance, electrolysis has certainly achieved a complete triumph. The means used and the results that followed are too closely related to admit of the question of mere coincidence.

Whatever may come of a further trial of galvanism, whether as applied to uterine fibroids or to any other form of disease, enough has been accomplished in this single instance to show that, as a thera-

peutic agent, it deserves, and must eventually receive, from the profession a far greater consideration and confidence than has yet been bestowed upon it.

CASE IV.—M. C., of Newburyport, a domestic, 24 years of age, never married, a naturally stout, healthy person, first noticed that she was growing unusually large about four years since. She came to consult me, about the middle of October last. Her case was readily diagnosed as a fibroid uterine tumor, occupying a great portion of the pelvic cavity and extending into the abdomen about three inches above the umbilicus. Her general health was not much disturbed; she was able to go through her daily duties as a domestic without much difficulty. Her chief trouble was a constant pressure against the bladder, causing frequent and painful micturition.

In view of what I had so recently seen accomplished by electrolysis, I proposed a trial of it in this case. In the course of a few days, she came to Lowell for treatment, and, with the assistance of Dr. Cutter, galvanism was applied for the first time, Sept. 22d, Drs. Graves and Fuller being also present.

The electrodes were thrust into the tumor, at two points six inches apart, to the depth of four inches, on either side, as in previous cases, and the galvanic current maintained five minutes. At the commencement of the operation, the pulse was 86; at the close, it had fallen to 54, the patient meantime being under the influence of chloroform. Returning to consciousness, she complained of severe pain through the abdomen. It continued, more or less severe, for several hours, but left her almost entirely in the course of the following day. For nearly a week, pressure upon the tumor gave pain.

The operation was repeated, in the same manner, three times in the course of as many weeks. She then returned to Newburyport, remarking, as she was adjusting her dress, that she "was sure her tumor was smaller, because her clothes seemed so much looser about her."

Upon a return of her menstrual period—which was within a week after leaving my charge—she noticed the discharge was unusually abundant. It continued so long and so profuse that her physician, Dr. Howe, was called in. Under his treatment, the hemorrhage gradually abated, and, in the course of three weeks, ceased altogether. A few days later, she returned to Lowell, for further trial of electrolysis.

During her absence, there was but slight change in the size of the tumor, especially the upper, or abdominal, portion of it; that it had diminished somewhat in the pelvic direction, seemed evident from the fact that, ever since the completion of the first series of operations, she had been perfectly relieved as to the pressure on the bladder and the almost constant desire for micturition, which had previously been so annoying.

The fifth application of galvanism was made the 20th of Novem-

ber; a day or two afterward, she menstruated naturally, and, on the 27th, a week from the previous operation, galvanism was again repeated. After one more operation, I shall advise a suspension of treatment for several weeks, to be resumed or not, according as circumstances may suggest.

Several cases, in addition to the above, are now under treatment, but, as yet, it is too early to form any just conclusion as to results. In proper time, however, after more extended experience, I hope to be able to furnish such a record as may fully and satisfactorily decide the question whether, in dealing with uterine fibroids, we really have in electrolysis a therapeutic agent of positive and unquestionable value or not.

ANEURISM OF THE EXTERNAL PLANTAR ARTERY.

By J. H. JOHNSON, M.D., Providence, R. I.

W. A. S., aged seven years, residing in this city, came under my treatment October 23d, 1873, for aneurism of the external plantar artery. The foot had been cut, several weeks previously, by stepping upon broken glass, but the wound had healed, leaving an aneurism of the size of an English walnut, and rapidly increasing.

Knowing that ligature of either tibial artery has been of uncertain success, and dreading the shock of an operation upon the very delicate constitution of the child, I proposed to treat the case by compression. I applied a tourniquet, with a pad adapted for compressing the posterior tibial artery, thus checking the flow of blood through the sac. This was applied one hour daily for two weeks. A thin cork pad, covered with charpie saturated in Monsel's styptic, was kept bound upon the sac by strips of adhesive plaster. As the current was not fully controlled, though the size and pulsations of the sac were greatly lessened, a second pad was strapped over the anterior tibial artery, on the dorsum of the foot.

At the beginning of the treatment, small doses of veratrum viride were given to reduce the circulation, the bowels being kept regular by compound cathartic pills. After two weeks, the tourniquet was applied at longer intervals, and the case was discharged, cured, on Dec. 4th, the sac having become perfectly flat and entirely pulseless.

During the whole time, no chloroform was administered, and, excepting the use of a crutch for some days, the treatment interfered but little with the usual activity of the patient.

SIMILARITY IN TWINS.—Dr. J. F. Bird writes that he has invariably found that when twins are contained in the same sac, and are sustained by the same placenta, they have always had a remarkable resemblance to each other; whilst those contained in different sacs, and sustained by different placentæ, are as unlike as children born of the same parents at different periods. His hypothesis is sustained, not only by repeated personal observation, but also by inquiries made of other observers.—*New York Medical Record*, Jan 15, 1874.

Progress in Medicine.

REPORT ON GENITO-URINARY DISEASES.

By T. B. CURTIS, M.D.

VENEREAL DISEASES.

TWENTY years ago, Bassereau showed, by confrontation of givers and receivers of venereal contagion, that venereal sores of a local character, and constitutional disease were each, invariably, transmitted as such, whence he inferred that syphilis, as then known, really comprehended two distinct, transmissible diseases, one being purely local (chancre), the other constitutional (chancroid). This broad and practical distinction is the basis of the doctrine of the so-called *duality* of syphilis, whereby is implied the dual character of the disease known under the name of syphilis before the time of Bassereau.

Ricord and his pupils further elaborated this doctrine, and showed that the local and the constitutional disease each depended on a distinct virus; the one, giving rise by inoculation upon any subject to a venereal sore (chancre), developed without incubation, presenting a non-indurated base, capable of repeated auto-inoculation, and always local in character; the other producing, by inoculation upon a non-infected subject, a venereal sore (chancroid) with indurated base and characteristic enlargement and induration of the neighboring ganglia, neither auto-inoculable nor capable of recurrence, and followed by the well-known symptoms of constitutional syphilis.

Ten years ago, these tenets were very widely accepted in all essential particulars. The unitists, as those authors were called who maintained that the chancroid and the syphilitic chancre were essentially parts of one and the same disease, succeeded in showing that certain venereal sores were at once auto-inoculable, with reproduction of chancroids, and followed by constitutional syphilis; but these phenomena were readily explained by the supposition of a "mixed chancre" resulting from a double inoculation taking effect upon the same spot, and this double contagion was shown to be a reality by Rollet and others.

The doctrine of dualism thus resisted all assailants, but new data have lately been brought forward, which, scientifically, imperil its foundations, however valuable its teachings may still be practically; a series of experiments made in England by H. Lee (1856), in Norway by Boeck, Bidenkap and Gjör, in Germany by Körner and Pick, have shown that the secretion of true syphilitic sores, both primary and secondary, may by irritation be rendered capable of repeated auto-inoculation and transmission, the result thereof being, apparently, the same as that produced by the inoculation of chancroidal matter; it was even shown that such artificial chancroids, originating in the auto-inoculation of matter from a syphilitic chancre, were transmissible to non-infected subjects in the form of local sores, without production of constitutional disease (Bidenkap).

Other experiments were soon instituted (Pick, Reder, Kraus) with non-venereal matter (the secretions of pemphigus, acne, scabies, lupus), and it was found that the inoculation of such matter, while inef-

factual upon sound subjects, was occasionally followed, when practised upon syphilitic subjects, by the appearance of pustules which were capable of repeated auto-inoculation. It thus appears that the inoculation, upon syphilitic subjects, of matter, whether specific or non-specific, may produce auto-inoculable and transmissible local sores.

Such are the facts which must be recognized and dealt with by any one who wishes, to-day, to constitute an acceptable theory of syphilis. How can the doctrine of dualism be said to be affected by these discoveries? Dr. Bumstead (*American Journal of the Medical Sciences*, April, 1873) shows, by numerous quotations from leading authorities, that considerable differences of opinion exist as to the value and purport of these new data. He is himself of opinion that, practically, the doctrine of dualism stands as well as ever; venereal disease remains either local or constitutional, and transmissible as such, requiring, in one case, a merely local treatment, in the other, a specific medication. From a scientific point of view, however, the case is different; the absolute distinction of chancre and syphilis as two separate and absolutely independent diseases cannot be maintained, as asserted till now by the founders of dualism. "A new field for investigation and experiment has been opened," says Dr. Bumstead, "which no one has yet fully explored, and which no one can pretend to understand."

In connection with the facts collected and commented on by Dr. Bumstead in his very able paper, of which the foregoing is an abstract, we call attention to an article by Dr. Vidal, of the St. Louis Hospital of Paris (*Annales de Derm. et de Syph.*, vol. iv. No. 5), which shows that the pus of ecthyma simplex, and of the ecthyma of typhoid fever, proved auto-inoculable in a third of the cases where inoculation was tried; three or four generations of artificial pustules, precisely similar to the spontaneous parent pustule, were thus obtained. It would, perhaps, have been interesting to know whether the subjects of these exceptional successful experiments were syphilitic or not, but Dr. Vidal's observations are silent on this point.

It may be remembered that R. Ceely (quoted by Simon in Holmes's *Surgery*, vol. i. p. 47) has twice succeeded in communicating, by inoculation, ordinary herpes of the lip; and that Piroinger has been able to excite conjunctival inflammation, not only with gonorrhœal pus, but also with non-specific matter, such, among others, as the secretion from the urethra of a boy aged three and a half years. As Dr. Bumstead says, "the exploration of this field promises to throw light, not only upon syphilis, but upon other contagious diseases, and even to add to our knowledge of the nature of specific poisons in general; but the work is yet undone, and any conclusions now are premature."

Professor Boeck and Axel-Scheel (*British and Foreign Medico-Chirurgical Review*, July, 1873) have made experiments with chancroidal matter (which, being unitists, they call syphilitic virus) with a view to settling the following questions:—

1. How long does the syphilitic virus preserve its power of inoculation? Twelve experiments were made with virus kept in sealed glass tubes. Positive results followed till the sixth day after the extraction of the matter. Virus kept between glass slides generally lost its power in three days.

2. What influence do heat and cold exert on this poison? Frozen
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virus was successfully inoculated; virus warmed in air up to 111° F. was effective, as also was virus warmed up to 122° F. in water; higher temperatures made the virus ineffective.

3. Is it inoculable after being dried into crusts? Crusts produced pustules after being kept six days, and, in two cases, after being kept twelve days. The same result was obtained with pus dried on a lancet; pus dried on linen and moistened with water, failed after being kept two days.

4. How far does it preserve its power when mixed with other substances? Matter diluted with one hundred parts of water gave a positive result, as also when mixed with thirty parts of olive oil. A mixture, in equal parts, of pus and of a solution of one third of carbonate of potassa was ineffective.

Leçons sur la Syphilis chez la Femme. Par A. FOURNIER. Paris. 1873. Pp. 1103.

This voluminous work is a most valuable clinical and practical treatise on syphilis, embodying all the information and experience obtained by the author during many years of study in the male and female venereal hospitals of Paris, and in a very large private practice. It contains not only a full *exposé* of all the known clinical features of syphilis, according to the tenets of the dualist school, which Dr. Fournier assumes to be thoroughly established, but a large mass of new material collected at the Lourcine Hospital, and relating particularly to the female sex, in which syphilis offers many traits hitherto unobserved in the male. The limited space at our command allows us only a mention of the more novel features of this treatise.

The author dwells at length on the chancre, its great diversity of situation in woman, and its great liability to escape observation, even by the bearer; he also describes the chancre of the os uteri, of which he has seen thirteen cases. The difficulty of correct observation in such cases as he relates, accounts for the supposed instances of constitutional syphilis unpreceded by any primary sore, or consequent on a coinciding or previous chancroid. He also calls attention to the great frequency, in women, of syphilides of the genital mucous membrane; syphilides of the os uteri are described, and are shown to be the source of contagion in some mysterious cases. Well-marked induration of secondary sores often occurs in women, making the diagnosis of chancre doubtful in many cases, and giving rise to supposed instances of recurrence of the primary lesion; Dr. Fournier thinks that induration is a very commonplace phenomenon, having but little semeiotic value. Articular pains, neuralgic or inflammatory, are very common in syphilitic women, as are also synovitis and dropsy of the tendinous sheaths, and their specific nature is clearly established. The muscular system is frequently affected, with production of myalgia, wry-neck, rigidity, marked muscular weakness, and tremor. Many of these secondary phenomena concur to make up what Fournier calls syphilitic pseudorheumatism. A peculiar feature of syphilis in women is its tendency, during the secondary stage, to produce functional disturbance of the nervous system; almost every variety of neurosis may be produced, under the influence of the syphilitic diathesis, which gives rise to a morbid condition of nervous susceptibility which the author calls secondary nervosism. Cephalæa, variously-localized neuralgia, analgesia

and anaesthesia are frequently met with as disorders of the sensitive nervous system; paralysis of various motor nerves and hemiplegia are also sometimes observed; these symptoms are not attributable to any discoverable lesion, and disappear in a few weeks under the specific treatment. Fournier also describes cases of sensorial disturbance of sight and hearing; of insomnia, of diminution or perversion of the intellectual faculties, and of syphilitic hysteria and epilepsy. Besides these various neuroses, the author describes certain forms of vaso-motor disturbance, consisting in local lowering of temperature, sensations of chilliness, general algidity, or sudden sensations of heat with local hyperæmia, and general perspiration, or local hyperhidrosis. Fournier's secondary nervosism and its protean forms are shown to be frequent, and their specific origin is established by their causal subordination to the syphilitic diathesis, as well as by their disappearance under specific treatment.

An important chapter is that devoted to the study of syphilitic fever. This phenomenon was observed in a third of the whole number of patients (1120) whose cases were reported; symptomatic fever, accompanying an eruption, was far less common than the essential form which occurs independently of any apparent cause, chiefly in cases of neglected syphilis; the febrile disturbance generally assumes an intermittent or remittent form, but it is sometimes continuous, and, not rarely, quite irregular. The temperature rises sometimes as high as 40° C., and may remain high for several days or weeks. The diagnosis between the various forms of syphilitic fever and true intermittent, typhoid, or subacute rheumatic fever is sometimes quite difficult.

Several forms of visceral functional disturbance are also described, as dyspnoea, cardiac palpitation, anorexia, or well-marked bulimy, polydipsia, dyspepsia, gastralgia, vomiting, and enteralgia; icterus is also not uncommon. The influence of syphilis on menstruation and gestation is shown, reference to the statistics of the hospital establishing that, out of 390 child-bearing patients, only 249 reached their full term.

The final chapter, devoted to the all-important question of treatment, contains an able discussion of the merits of the expectant method, as compared with the specific treatment. Dr. Fournier energetically defends the use of mercury, and maintains his preference for the green iodide for the majority of cases; inunction he reserves for cases where rapid and sure mercurial action is required. He recommends that the mercurial treatment be kept up during about two years, with occasional interruptions, every two months or so, of a few weeks' duration.

In a paper on the etiology of hereditary syphilis (*New York Medical Journal*, July, 1871, and July, 1872), Dr. F. R. Sturgis contributes a most careful and thorough investigation into the value of the evidence available for the purpose of settling the vexed question of the mode of the hereditary transmission of syphilis. The author does not believe that the offspring can be infected before birth, except by the intermediary of the previously diseased mother, her disease being derived in the ordinary way from the father's contagious accidents. In conclusion, Dr. Sturgis says:—"Although I do not say absolutely that the paternal transmission (i. e. by the semen) is impossible, I do not

hesitate to say that it is *very improbable*, and on these grounds: 1. Because the reported cases are wanting in such details as to render them convincing. 2. Because this theory is entirely opposed to our present knowledge of the contagious properties of syphilis and its mode of propagation; and, 3. Because our knowledge of infantile syphilis has not kept pace with our progress in other branches of the disease."

URINARY SURGERY.

According to Dr. F. N. Otis (*New York Medical Journal*, March, 1873), a very slight degree of stricture, such as the largest divulsing instruments of Holt, Sir H. Thompson or Voillemier are incapable of dealing with, or the existence of one or several bands of stricture, sufficiently wide to admit an instrument corresponding to numbers 28 or 30 of the French scale, may suffice to keep up a chronic purulent urethral discharge. Hence the necessity for a new instrument which shall deal with these very wide strictures, or "bands of stricture," viz., the dilating urethrotome of the author. This instrument consists of two parallel bars, which are connected by several short transverse pivotal bars (as in the urethral dilator of Michéléna), and which can be widely separated by a screw situated in the handle, so that the calibre of the instrument can be carried from 23 to 34 (French scale). A sliding urethrotome traverses one of the bars, and its blade can be effectively brought to bear on any desired point, the mucous membrane being at the time distended by the expanded parallel bars. Dr. Otis has used this instrument in twenty-seven cases, cutting fifty-eight bands of stricture. Several cases are reported, among them one in which four distinct operations were successfully performed on as many bands of stricture, in a urethra which admitted a number 30 sound, and through which Voillemier's largest shaft (32) had in vain been rapidly and repeatedly driven. Dr. Otis says that no consecutive dilatation with sounds is necessary after his treatment. He asserts, moreover, that mere diminution of suppleness of the urethral wall, without interference with the normal calibre, suffices to keep up gleet; that the complete division of the cicatricial or stricture tissue, may be followed by its entire absorption, without the usual consecutive long-continued use of sounds. He claims in six cases to have absolutely demonstrated the entire absorption of the stricture, thus preventing any liability to relapse.

If these views are admitted, it becomes necessary to pursue gradual dilatation much further than is generally deemed necessary; and the hitherto approved means of treatment (Maisonneuve's urethrotomy; Holt's or Voillemier's divulsion) must, in many cases, only serve as a means of treatment preparatory to the repeated use of the dilating urethrotome, which may have to be brought into play as often as a 28 or 30 bulbous sound fails to go through the urethra. It is needless to observe how protracted and how trying would be the repeated interference thus rendered necessary.

Diseases of the Urinary Organs. By J. W. S. GOULEY, M.D. New York: 1873. Pp. 368.

This work is based upon lectures delivered by the author, on Stricture of the Urethra, Diseases of the Prostate, and Stone in the Bladder. A noticeable feature is the extension given to the use of tunnelled in-

struments, for cases where the passage through the urethra is rendered difficult by false passages or eccentric stricture. This method, which is an ingenious modification of the French "*cathétérisme sur conducteur*," was adopted by Dr. Gouley in 1864. It is applicable to the following instruments: Small catheters for eccentric or otherwise difficult stricture; sounds for dilatation of stricture complicated with false passage; Sir H. Thompson's instrument for over-distending stricture, which, Dr. Gouley says, is practically a divulsor; urethrotomes, Charrière's or Maisonneuve's modified; and, finally, an ingenious grooved and tunnelled catheter-staff for external perineal urethrotomy. The following are the essential features of the tunnelled instrument, and its mode of introduction: The surgeon first passes through the stricture and into the bladder a slender, probe-pointed whalebone bougie, about twenty-four inches long, of which the extremity may be either straight or bent, the latter for dealing with eccentric stricture. The instrument which it is desired to pass is grooved on its convex aspect, and the groove, being bridged over at the vesical extremity, is thereby converted into a tunnel, an eighth of an inch long, of which the opening is situated at the tip of the instrument. The free end of the whalebone bougie is now slipped through the tunnel, and the instrument is made to run along the guide afforded by the bougie; the bladder being thus safely reached, the whalebone guide is withdrawn. The author describes a method for performing external perineal urethrotomy with a conductor; in his operation, a grooved and tunnelled staff, to be used with the whalebone guide, is substituted for Syme's grooved staff, the objection to this instrument being that one cannot always be absolutely sure that it has not entered a false passage instead of being engaged in the stricture. The *modus operandi* is as follows: the whalebone bougie having been passed through the stricture, the grooved and tunnelled staff is carried along the guide till its extremity brings up against the stricture; the external incision, which the author advises should be an inch or an inch and a half in length, is then made, and the end of the staff being felt, the finger-nail is inserted into the groove, as in lithotomy, and the urethra is opened, so as to expose the catheter. As suggested by Mr. Avery, a loop of silk is then passed through each edge of the incised urethra, close to the stricture, and held by the assistants on either side; the catheter being next slightly withdrawn, the strictured canal is thoroughly divided with a small pointed knife, the black whalebone-bougie being a safe guide for this step of the operation. The catheter staff is then carried along the guide into the bladder, and removed after withdrawal of the urine. Dr. Gouley, like many other practitioners, at home and abroad, no longer ties in a catheter after external or internal urethrotomy. In chronic prostatitis, Dr. Gouley says he has found gradual over-distention of the prostatic urethra, with a two-bladed instrument capable of expansion at its vesical extremity, of great value in some cases. This treatment, with a similar instrument, has also been lately recommended by Tillaux (*Bulletin Générale de Thérapeutique*, Aug. 15, 1873), to be tried after failure of cauterization. The last chapter is devoted to Dolbeau's perineal lithotomy, which Dr. Gouley has performed in three successful cases, and which he recommends as preferable to median lithotomy with fragmentation of the stone; he proposes a new lithoclast, which, though smaller

than Dolbeau's, is quite as strong. Dr. Gouley does not question Dolbeau's assertions to the effect that in his operation the vesical orifice of the urethra is only dilated, without ever being ruptured ; Gosselin (*Clinique Chirurgicale de l'Hôpital de la Charité*, vol. ii. p. 352) speaks of a case operated upon in his wards by Dolbeau, in which, the patient having died of erysipelas, the neck of the bladder was found to have been torn, instead of having been simply dilated. The liability of the neck of the bladder to be lacerated, and the great difficulty of fragmentation and extraction in an empty and contracted bladder, seem to us objections to perineal lithotrity, which can only be answered by further proof of the value of the operation.

De la Fièvre dans les Maladies des Voies Urinaires. Par A. MALHERBE. Paris. 1873. Pp. 146.

This essay, on what is commonly called by the unsatisfactory name of urethral fever, is based upon a large number of observations, with thermographic tracings, showing the invasion and progress of febrile disturbance after lithotrity, internal urethrotomy, &c. The author is of opinion that the feverish symptoms are always connected with renal disease, either temporary or permanent, with functional disturbance of the kidneys, and retention, more or less complete, of the excremential constituents of the urine. The renal alteration, which is the cause of the feverish attack, is either simple hyperæmia or interstitial nephritis, the latter ending in suppuration or atrophy of the renal parenchyma. The symptoms are of two-fold origin, consisting of fever, attending the inflammatory process in the kidney, and of toxic phenomena due to retention of excremential materials. The chief means of treatment are sudorifics, alcoholic stimulus, and dry cupping in the loins; sulphate of quinine in urethral fever, whether administered by the mouth or hypodermically, falls far short of the reputation which it enjoys in this connection. Surgical interference is only advisable in cases where there is stagnation or retention of urine; then the predominant indication is to reëstablish a free outflow of the urine.

In a paper which was read before the Royal Medical and Chirurgical Society (*Lancet*, March 8, 1873, and *American Journal of the Medical Sciences*, July, 1873), Dr. W. H. Dickinson describes the lesions characteristic of what is called the "surgical kidney." The alterations thus designated, and the attendant symptoms, constitute the natural termination of stricture of the urethra, and are, moreover, the great source of danger to be apprehended from catheterism or lithotrity. In such cases, the renal parenchyma is turgid and friable, with small, scattered abscesses, or soft, yellow deposits antecedent to abscess; in the cones, white lines are observable, which are morbidly occupied, distended tubuli. The microscopic appearances show the existence of disseminated intertubular suppuration, the distribution of which is regulated by the course of the veins, which are dilated and filled with coagulated blood; the urine is full of bacteria and vibrios, whether as a cause or as an effect of its putrefied condition, the author does not venture to say. He thinks that the correlation of these pathological conditions shows that the renal alteration is due to regurgitation of urine charged with morbid products, which distends the straight ducts, and thence enters the neighboring veins. The condi-

tions which bring about this contamination of the urine appertain to obstructive disease, preventing free outflow (stricture, hypertrophy of the prostate, stone, &c.), and to chronic cystitis (due to primary retention or to vesical calculus, &c.). In cases so tending, instrumental interference (catheterism, lithotripsy) seems to be the instigator of the morbid process called "urethral fever"; but as this acute disturbance may apparently arise spontaneously, independently of surgical interference, Dickinson proposes to call the febrile attack by the name of "uriseptic" fever, which new designation seems to us to supply, in a satisfactory way, a long-felt desideratum. The chief objects of treatment in such cases are, first, prevention; secondly, preservation or restoration of the normal acidity of the urine; in view of this result, the introduction of antisepsics into the bladder may prove beneficial.

Napier proposes (*Medical Times and Gazette*, Dec. 6, 1873) a new sound for the detection of calculus. "The calculus detector is precisely similar in form to the ordinary sound. It is composed of steel up to the commencement of the curve, where it is reduced in diameter, and a coating of pure lead is cast around the smaller part, of sufficient thickness to render the surface perfectly smooth and even along the entire length. The leaden extremity is then polished as highly as possible with a leather, and rendered keenly sensitive to the slightest contact with any rough or hard substance, of which it would be found to bear visible trace."

This addition to sounds may be valuable for cases where it is difficult to get satisfactory evidence of the presence of stone; it is known that great difficulty is sometimes experienced with the ordinary sound, when the calculus is very large, so as to completely fill the bladder. [See *Practical Lithotomy and Lithotripsy*, by Sir H. Thompson, 1871, p. 116.]

SWALLOWING A BELL.—It has often been a mooted question as to what sized foreign body would be capable of passing through the alimentary canal, and be discharged *per rectum*. In the last *Indian Medical Gazette*, an interesting case bearing upon the question is reported by Mr. Higginson. He reports that a child of four years of age put a "ghungree" (a little brass bell such as is commonly attached to ankle ornaments) into her mouth and accidentally swallowed it; the child at once ran to her father and told him what had happened; as she felt as if the thing had stuck halfway, the father made her eat a piece of bread to force it into the stomach. Application was then made to Mr. H. for a purgative. He directed the parents not to give any medicine whatsoever, but to keep the child quiet, and give her a hearty meal of her ordinary food, in order that the foreign body might haply get surrounded by feculent matter, and so pass through safely. Next day the child complained of pain in the belly, and soon had a motion, in which the "ghungree" was found imbedded.

The bell is three-quarters of an inch long, and an inch and a half in circumference round its middle; it tapers towards each end, to one of which is soldered a little ring, the other being cleft to admit of a small stone.—*The Medical Press and Circular*, Nov. 26, 1873.

Boston Medical and Surgical Journal.

BOSTON : THURSDAY, JANUARY 29, 1874.

THE question of the present status of the army medical corps, with regard to rank and to the prospect of promotion, is one which directly concerns the whole medical profession. We heartily sympathize with the active efforts now in progress tending toward the repeal of legal provisions which, during the last five years, have borne unjustly on a deserving department of the public service. The facts of the case are briefly as follows.

To reduce the army to a degree that was thought to be required in time of peace, Congress, in 1869, passed an Act, which, among other provisions, practically forbade farther promotions and appointments in the medical staff. The same prohibition applied also to other staff departments, it is true, but it operated very unequally, and the medical corps was the one to suffer most. According to the law, the medical officer then holding a commission could not look forward to anything higher than a major's rank as the summit of his ambition in that direction ; and this point of dignity could be reached only after about fifteen years. If the surgeon, gray in the service, retires at length, a veteran, he must be content with second-rate rank and emoluments ; while, for the same term of service, not involving any greater exposures, abilities and responsibilities, the staff-officer of the Adjutant-General's, the Quartermaster's, the Engineers' department receives a retiring rank and pay one and often two grades higher.

The medical officers of the army, from the Surgeon General down, demur with reason against this inequality. They ask the repeal of such provisions of the law as bear unjustly on themselves, while their colleagues of the navy and of other coördinate staffs in the army are faring better without superior desert. They point with becoming pride to what has gained for them world-wide encomiums, in their bravery and efficiency and sacrifices in the public service, and they do not willingly take a secondary place in the esteem of the government they have served so well. They believe that the Government cannot repudiate its contract with them in its zeal for the economy of a peace establishment ; there are veteran surgeons, and men in middle life, who entered the service long ago, believing that the position of a medical officer offered in its rank and dignity and pay, and in the prospective promotions, something approaching an equivalent of the honors and rewards of medical practice in civil life ; and now, at a time of life when to leave the service and begin civil practice would be, to

most of them, a hazardous venture, they see their hopes of the future dwindling to the vision of a retirement with an inferior rank, and with an income hardly sufficient to maintain themselves or their families decently. Congressmen have, of late, been wont to look after their own financial legislation on somewhat different principles.

There is another view of the matter. The law forbids the filling of subordinate vacancies as well as prohibits promotions, and so the medical corps is a body without the stimulus of growth. The medical corps was never overstocked, even in time of war; since the close of the rebellion, it has been constantly below the minimum. Consequently, the efficiency of the service, which was compromised already by the limited numbers of the corps, forcing additional labor on a few men, is still farther impaired by a statute which practically forbids renewal and growth. The Government confesses its weakness in this direction by supplementing the service of a curtailed department by the hiring of contract surgeons. We need not discuss the relative merits of a commissioned and of a contract medical service, or the importance, on both economical and humane grounds, of giving the army the best medical attendance that can be obtained. The fact remains evident that there is both injustice and shortsightedness in this endeavor to practise economy.

We cannot conceive of any valid argument against the plea of the medical staff. It seems to us a matter which, on its intrinsic merits, comes home to the whole profession, and which should stimulate physicians, individually and by associated action, to lend their sympathy and coöperation. By nothing so well as by a general and decided expression on the part of the profession will the Government be induced to take action which, in conceding what the army medical staff modestly requests as its right, shall recognize not only the merits of a deserving staff-department, but the dignity of medical science.

And we are glad to observe that the medical corps is getting this aid. Our contemporaries are unanimous in favoring the claim, and the medical societies are moving with commendable alacrity on all sides. Let not our Boston and New England Societies be slow in aiding a cause so obviously fortified by right and justice.

PREGNANCY AND DELIVERY WITHOUT RUPTURE OF THE HYMEN.—This extraordinary case is reported by Prof. R. Beverly Cole, of San Francisco (*The Western Lancet*, Dec., 1873). Upon being called to the woman, on account of abdominal pains, he obtained the following history. Her age was 24, and although she had been married, her husband, a sea captain, had gone to sea upon the very day of the marriage, and had not since returned. Having been regular in her catamenia since, she thought it impossible for her to be pregnant. Upon exami-

nation, the hymen was found unruptured, presenting a thick, semi-cartilaginous margin, with an orifice barely sufficient to admit the passage of the finger. The os uteri, however, proved to be dilated, and the presenting head of a foetus was readily made out. The patient was left for three hours, and when the professor returned the pains had begun to be severe and continuous, so that it seemed to him more important to support the perineum, than to divide the cartilaginous hymen. The unfortunate result of this decision was, that the head of the child, advancing with great force and rapidity, was driven directly through the perineum, between the sphincter ani and the posterior commissure of the vulva.

[It seems somewhat remarkable that no attempt was made to divide the hymen, when its existence was first discovered, and equally unaccountable is it, that a woman in this abnormal condition should be left by the attendant for a period of three hours, after labor had actually begun.]

DISEASE-DESTROYING TREE.—The *Medical Times and Gazette*, Nov. 1, 1873, states that M. Gimbert, who has been long engaged in collecting evidence concerning the Australian tree *eucalyptus globulus*, the growth of which is surprisingly rapid, attaining, besides, gigantic dimensions, has addressed an interesting communication to the Academy of Sciences. This plant, it appears, possesses the wonderful power of destroying miasmatic influence in fever-stricken districts. It has the property of absorbing ten times its weight of water from the soil, of emitting antiseptic camphorous effluvia, and when sown in marshy ground of drying it up in a very short time. The English, who were the first to try it at the Cape, within two or three years, completely changed the climatic condition of the unhealthy parts of the colony. In the spring of 1867, about 13,000 of the eucalyptus were planted at Pardock, in Algeria, on a farm situated on the banks of the Hamyne, which was noted for its extremely pestilential air. In July, of the same year—the time when the fever season used to set in—not a single case occurred; yet the trees were not more than nine feet high. Since then, complete immunity from fever has been maintained. Similar results have followed the planting of the tree in the neighborhood of Constantine, where, in the course of five years, tracts of marshy ground have been completely dried up. In the Island of Cuba, fever and other paludal diseases are said to be fast disappearing from the unhealthy districts where the eucalyptus has been introduced. No information is given as to whether this beneficent tree will grow in other than hot climates.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, January 10, 1874.)*

OPERATIONS were performed in the following cases:—Recurrent Tumor of Leg, Vesical Calculus, Hydrarthrosis, Tumor of Leg, Necrosis of Tibia,

* This report, for Jan. 10th, should have appeared last week, but was unavoidably postponed.—EDS.

Conical Stump; Abscess of Thigh; Extensive Laceration of Hand and Arm; Fistula in Ano, Contraction of Anus with Perineal Fistula, Tumor of Eyelid.

Recurrent Tumor of Leg; Amputation.—A myxomatous tumor was excised by Dr. Bigelow, five weeks ago. (See report for December 6th.) The disease reappeared with the commencement of granulation, and had been steadily progressing, without, however, affecting the inguinal glands. Dr. B. amputated at the junction of the middle and upper thirds, taking a single flap from the outer and posterior portion of the leg.

Vesical Calculus; Lithotomy—in a boy, 11 years old. The symptoms had lasted six years. Dr. Cabot operated by the lateral method. The stone was very friable, and of about the size of a hickory nut. It broke into many fragments during its extraction.

Hydroarthrosis of Knee.—A previous operation on this joint was detailed in the report of last week. The joint had again become distended by fluid. Before operating, Dr. Bigelow applied elastic compression above and below the patella, by stretching two thin rubber bands, measuring two by eight inches, transversely across the axis of the limb. He then punctured the joint on its outer side with a small hydrocele trocar, and withdrew five ounces of turbid serum.

Tumor of Leg; Amputation—in a male adult. It had grown steadily for seven years, occupied the fibular side of the leg, and measured nineteen and one half inches in length. The central portion projected between four and five inches from the normal line of the leg, and was of firmer consistency than the rest of the growth. From the amount of fluctuation, it was evident that the tumor contained a large quantity of fluid. Dr. Cabot amputated just above the condyles of the femur by the circular method. On examination after removal, a large cyst was found extending over the entire surface of the growth, holding about a quart of thin, chocolate-colored fluid, which contained cholesterine. A solid mass, of the size of an orange, was attached to the inner wall of the cyst, and was surrounded by the fluid. The disease had not involved the bones or muscles of the neighborhood. Under the microscope, the solid portion of the tumor proved to be fibro-sarcoma.

Necrosis of Tibia—in an adult, without known cause. Painful for eight years. Dr. Bigelow stated that, although the sequestrum was not loose, he would, on account of the pain, cut down upon it, although, as a rule, he never interfered with a sequestrum until it was detached; unless, possibly, to hasten a superficial exfoliation by touching it with acid. An incision, seven inches long, was made upon the tibia, and the periosteum turned back. Two parallel lines, five inches long and one fourth of an inch deep, were made in the bone with a circular saw (*scie à molette*). A part only of the included anterior wall could be detached; the sequestrum being everywhere adherent, the operator stated that he did not see that special advantage would result from what he had done.

Conical Stump of Leg; Re-amputation—in an adult. Dr. Cabot dissected back the integument, leaving the cicatrix, and shortened the bones three inches.

Abscess of Thigh—in a man 27 years old, and situated on the outer side of the limb, five inches below the trochanter major. Dr. Bigelow made an incision, and evacuated about one ounce of cheesy pus. A sinus, extending in the direction of the great trochanter, was laid open.

Extensive Lacerated Wound of Hand and Forearm.—About a week ago, the man's hand was caught between a "picker and a beater," producing extensive laceration of the soft tissues and fracture of three metacarpal bones. Free incisions were made by Dr. Bigelow, laying open all sinuses, and the sharp ends of bones were removed by cutting forceps.

Fistula in Ano—in a male adult. No internal opening found. Laid open by Dr. Cabot.

Contraction of Anus, with Perineal Fistula—in a young adult. The patient was idiotic, and no history of the case could be procured. The peri-

næum was uniformly indurated, studded with fistulous openings and sinuses, radiating in all directions from the unyielding anus as a centre. Dr. Bigelow stated, before an examination, that the general appearance resembled that caused by cancerous stricture low down, but that the patient was young for that disease. The most probable explanation of the numerous fistulae, uniform and extended induration and rigid anal contraction, was imperforate anus, for which an operation had been performed in infancy. If so, it was another argument against surgical interference in that affection. In fact, he had long maintained that a child with imperforate rectum had better die than live, except, perhaps, in the very rare occurrence of occlusion of the outer margin of the anus by a mere membrane, as sometimes described, but which he had never met with. He divided the external sphincter, to allow, for the present, a comfortable passage of faeces, and said that any further operative measures were contra-indicated.

Tumor of Eyelid—small, inflamed cyst, located just below the eyebrow of an adult female. Dr. Bigelow excised the growth. H. H. A. BEACH.

(Saturday, January 17, 1874.)

Operations were performed in the following cases:—Hydrocele, Tumor of Back, Cancer of Breast, Tumor of Breast, Dislocation at Shoulder-joint, Necrosis of Ulna, Dislocation at Shoulder-joint, Caries of Tibia, Epithelioma of Cheek, Tumor of Neck, Felon, Painful Cicatrix, Recurrent Parotid Tumor.

Hydrocele—of tunica vaginalis, in an adult, and of seven months' duration. Dr. Hodges punctured the sac with a trocar, and evacuated a half-pint of clear serum.

Fatty Tumor of Back—in a woman twenty-two years old; of the size of a lemon, located in the infra-spinous process of the scapular region. It first appeared two years ago, and had gradually increased without pain. Within two months, it had doubled in size. Dr. Cabot removed it by a straight incision.

Cancer of Breast—of one year's growth, in a single woman thirty-three years old. It involved the whole gland, and was adherent to the skin. The nipple was retracted, but the axillary glands were not enlarged. Dr. Hodges removed the diseased mass by making two semi-lunar incisions and dissecting it from the pectoralis major, the sheath of which was adherent to the gland.

Chronic Mammary Tumor—in a single woman twenty-six years of age. Painless, and of three and a half years' duration. Dr. Cabot made a straight incision of two inches, and squeezed the growth out from the breast; it was adherent to the nipple only, and of the size of a horse-chestnut.

Dislocation at the Shoulder-joint—of nine weeks' standing, in a woman sixty-six years old. Dr. Hodges directed attention to the prominent acromion process, the depression beneath it due to the displacement of the head of the bone, the tense fibres of the deltoid, the projecting elbow and the loss of motion. The head of the bone could be felt below the coracoid process. The patient being steadied by assistants, Dr. Hodges rotated and circumducted the arm forcibly in all directions, to rupture adhesions; he then applied extension to the limb at a right angle with the body, counter-extension being maintained by a folded sheet carried around the chest. In a few moments he brought the elbow suddenly down to the chest, using his own forearm as a fulcrum, near the axilla; the head of the bone readily entered the socket, and was kept there by a swathe carried around the chest.

Necrosis of Ulna—in a young man. The sequestrum was loose, and protruded three inches from the anterior surface of the arm. The orifice of the sinus was enlarged by an incision, and the dead bone extracted by Dr. Cabot.

Dislocation at the Shoulder-joint—of eleven weeks' standing, in a woman seventy-two years old. The dislocation was sub-coracoidal, and presented

similar appearances to those which characterized the case just described. Dr. Hodges reduced it by the same method, with some additional effort. Attention was called to the ease of reducing long-standing dislocations in cases like these, as compared with what might be expected under similar circumstances in young and vigorous male subjects.

Caries of Tibia—in a woman twenty-six years of age. Since she was three years old, fragments of dead bone had from time to time been discharged. Dr. Cabot enlarged the fistulous opening, and, with a gouge, removed the disease.

Cancer of Cheek—in a woman of seventy years. An epithelioidal growth, two inches long and one inch broad, slightly raised from the surface, situated below the zygoma, in front of the ear, secreting a foul-smelling discharge. A movable nodule, of the size of a grape and not ulcerated, had recently appeared in the skin, one inch below the growth just described. Both these growths were superficial, and not adherent to the parts beneath. They were excised by Dr. Hodges. The cheek was dissected up on each side of the larger wound, to permit the approximation of its borders.

Tumor of Neck—situated in the supra-hyoïd region of a young male adult. It was first noticed, on the left side, about one year ago, had gradually grown toward the median line, and was somewhat painful. It was partly solid and partly fluctuating. It filled the whole interval between the two sides of the lower jaw, projected beneath the tongue internally, and bulged below like a large double chin. Dr. Cabot considered it a form of ranula. He punctured it, through the mouth, with a trocar, and evacuated about two ounces of slimy and bloody fluid containing cholesterine. A counter-opening was made beneath the chin, and an India-rubber tube, with perforations along its sides, was passed in at the mouth and brought out through the external incision, to serve both for drainage and as a seton.

Felon—incised by Dr. Hodges.

Painful Cicatrix—in a stump of the thigh, after amputation for knee-joint disease, some years since. The whole cicatrix had been dissected out once. There now remained a hard, painful spot, about the size of a walnut, on the under side of the cicatrix. Dr. Cabot excised the indurated portion, at the bottom of which was a small granulating sinus. This he dissected out.

Recurrent Parotid Tumor—in a man fifty-three years of age; the original growth was of twenty years' standing. Four years ago, it was removed by Dr. Bigelow. It re-appeared one year ago, gradually increased without pain until it attained the size of a hen's egg, and had become somewhat attached to the superficial and deep tissues of the region. Dr. Hodges made a curved incision over the tumor, and reflected the flap toward the ear. He then dissected the tumor from the masseter muscle, posterior border of the ascending ramus of the lower jaw and the mastoid process. Old cicatrices impeded the dissection, and a large number of vessels required ligature. The disease was sarcoma. It was remarked that the lapse of twenty years at this period of life not unfrequently converts a tumor, otherwise benign, into a malignant growth liable, after removal, to local recurrence.

H. H. A. BEACH.

BOSTON CITY HOSPITAL.

THE surgical operations on Friday last, January 23d, were as follows:—

Dr. Cheever performed Wood's Operation for the radical cure of inguinal hernia, in two cases. The patients were adults. A description of the operations is omitted, as they differed in no particular from the details presented in surgical text-books.

Dr. Thorndike operated in a case of Traumatic Gluteal Aneurism. The patient was a man about thirty years of age. Last Christmas day, he became engaged in a quarrel, in the course of which he was stabbed in the left buttock, the left thigh being flexed upon the abdomen at the time of the in-

jury. The wound was at once followed by copious haemorrhage. The bleeding was controlled, but the weakness resulting from the loss of blood forced the patient to his bed. Presently, intense pain developed in the injured region, and shot down the sciatic nerve; and when Dr. Thorndike first saw the patient, at the end of ten days after the injury, the continued use of morphia was necessary to afford any degree of comfort, day or night.

On examination of the part, Dr. Thorndike found the wound quite healed. Just behind the great trochanter, and over the sacro-ischiatic foramen, was a pulsating tumor of the size of a goose-egg; its outline was irregular. On auscultation, a distinct bruit was evident. There was great tenderness on pressure, and the pain was excessive. In the two weeks' interval since this first examination, the symptoms had increased in severity, and now demanded surgical interference for their relief.

Dr. Thorndike said that, in gluteal aneurism, there was a choice of two operations—either to cut down on the aneurismal tumor, turn out the clotted contents and tie the injured vessel in the wound, or to adopt Hunter's operation and ligate the internal iliac. The latter was attended with the greater risk, and was adapted rather to a spontaneous aneurism whose walls possibly extended within the pelvis, than to a traumatic aneurism arising from an injury of the artery outside the notch. The cause of the aneurism would determine the choice of the operation. He therefore adopted the old method of operating.

To control the haemorrhage, Skey's abdominal tourniquet was applied, but though carefully adjusted upon the aorta, it failed to compress effectually, and the bleeding was prevented by digital pressure on the artery against the pelvic edge, in the wound.

To expose the tumor, two incisions were made, one, eight inches long, starting two inches below and just behind the great trochanter, and extending obliquely upward and backward toward the sacrum; the other, four inches long, extending from the middle of the former, upward, toward the crest of the ilium. The tissues were divided down upon the coagulum, and the incision into this mass was immediately followed by a gush of clotted blood and by a fresh arterial flow from the injured vessel. Not without difficulty, a ligature was passed, by means of an aneurism-needle, around the vessel on the proximal side of the wound and then on the distal side. Examination showed that the knife producing the injury had penetrated the gluteal artery just as the vessel entered the sacro-ischiatic foramen to leave the pelvis.

The result of this operation will be noted in a future report.

Dr. Cheever showed the patient on whom he had operated two weeks previously for hare-lip. The wound was entirely healed. The line of the lip was perfect, without any notch, and the scars were hardly visible.

On Tuesday, January 17th, Dr. Cheever performed Excision of the Hip. The patient was a female, 37 years old. Hip disease existed in childhood, and went through its usual stages of abscess, sinus, dislocation and spontaneous cure. For twenty-four years, the hip remained well. The patient walked with a crutch; the limb was wasted, shortened and inverted. She was free from pain. Three years ago, she had a fall and a sprain. This lighted up anew the slumbering tendencies of the diseased joint. Pain, abscess, sinus, hectic, followed, and the patient has now been bed-ridden for a year and a half. An operation is now sought by her to relieve pain, but not with the expectation of getting a useful limb.

An irregular V-shaped incision was made through the two sinuses. The head of the femur was absorbed. The neck and trochanter rested against a new socket on the dorsum illi, which was deepened by new bone. Extensive disease of the femur required the removal of three inches with the saw. Three loose, pointed fragments of carious bone were extracted; the largest lay against the obliterated true socket. No farther disease of the pelvis was found. The cavity was trimmed with the gouge, and left open to suppurate. Amputation would have been easy, but must have left a diseased stump.

F. W. DRAPER.

Medical Miscellany.

FRIGHT to the mother during pregnancy is alleged by Dr. W. W. Ireland to be a not very uncommon cause of idiocy.

A DEATH FROM HÆMORRHAGE, consequent on rupture of the Fallopian tube, is reported by Dr. J. B. M. Miller. It occurred in a robust, healthy colored girl, 26 years old; it was thought to be dependent upon extra-uterine fœtation.

CHOLERA IN POLAND.—From the beginning of the recent outbreak of cholera up to the middle of October, the total number of cases in Russian Poland amounted to 56,477, of which 26,234 were fatal. In Warsaw alone, there occurred during this period 4,933 cases, 1,887 proving fatal.

APPOINTMENT.—Dr. H. Knapp has been appointed ophthalmic surgeon to the Charity Hospital, New York, vice Dr. H. D. Noyes, resigned.

DEATHS FROM CANCER.—Among the twenty-three deaths from cancer, which have occurred during the past twenty-four years in the experience of one of our life insurance companies, only one seems to have been hereditary. In this case, the only other member of the family who appears to have had the disease was a sister.—*The New York Medical Record*.

STATISTICS OF MORTALITY.—A most interesting paper has been prepared by Dr. A. H. Buck concerning the causes of 1,000 deaths in the mortality experience of a life insurance company in New York. It was proved that the most fatal element by far in the list of losses was consumption, 268 deaths, or 27 per cent. of the entire number, being referred to this malady.

ARSENICAL PAPER HANGINGS.—“Arsenic occurs not only in the bright green papers, but, also, occasionally in the white or cream-colored enamel papers, so frequently used for drawing-rooms, and in ~~drab~~ papers tinted with native ochre.”—*The Lancet*, Jan. 3, 1874.

RATIONAL MEDICINE WELL DEFINED.—The Italian journals relate that a vice-professor of the Faculty of Medicine of Naples, having asked permission of the Faculty to open a course on homeopathy, received the following answer:—“The Faculty could not grant the authorization, seeing that rational medicine, which is taught on the basis of natural sciences, excludes allopathy as well as homœopathy, and, indeed, all absolute systems of medicine.”—*The Lancet*, Dec. 13.

PUBLIC URINALS IN PARIS.—There are, in Paris, 730 places of public accommodation styled “urinoirs.” This number includes 40 having the shape of a kiosk, and belonging to the Compagnie des Kiosques, 234 of the same shape belonging to another company, and for each of which the city pays tribute, 228 having the shape of stalls or boxes lighted by gas, and about 200 having a central position, and three stalls on each side. The latter is the newest model, quite recently adopted. It is gratifying to know that the two uncovered slabs of slate so commonly met with at the angles of houses, and which exposed the occupiers to the gaze of passers by, will be shortly entirely suppressed.—*The Lancet*.

SIREN-LIKE MONSTER.—Dr. William Maclarens reports a case of siren-like, malformed fetus, delivered at full term. From the pelvis downward, both limbs were fused into one pyramidal mass, bifurcating into a fan-shaped arrangement of the feet. Anteriorly, at the junction of the abdomen with the lower extremities, two inches below the umbilicus, and exactly in the mesial line, was found a small, papular nodule of skin, without any opening. At a corresponding point posteriorly, and one and a half inches below the coccyx, hung, like a caudal appendage, a well-formed penis, with a pervious canal, without any trace of scrotum, testes or anus.—*Edinburgh Medical Journal*.

MONSTROSITY.—A singular case of monstrosity is related by Dr. Wm. Elmer, in the Transactions of the New Jersey Medical Society for 1873. A woman was delivered, in November, 1871, of a male child, which was discovered to have a hare-lip, and, upon further examination, a cleft palate was found to completely open into one of the buccal and nasal cavities. This pitiable object was unable to nurse, and survived only two or three months. Subsequently, the mother was again confined, and the same deformities were found to exist in this child, also, only in a worse degree. At last accounts it was doing well.

MEDICAL ZEAL.—One of the district reporters of the New Jersey Medical Society, in order to collate statistics referring to the prevalent diseases of the county, wrote to every practitioner in the county, but received replies from two only. He, therefore, winds up his brief paper as follows:—"If it should ever be my misfortune again to be elected to this responsible office, I shall direct all my correspondence to the undertaker, hoping, thereby, to get results, if nothing else. . . . Quite adverse to the Irishman's description of the steam-shovel, viz.: 'You can shovel, but you cannot vote; our members vote, but do not shovel.'"

NOTES AND QUERIES.

EFFECT OF SUGAR UPON GENERATION.

PROF. HENRY TANNER, Queen's College, Birmingham, says:—"I have every reason to believe that the action of sugar is most important in its influence upon the generative system, and I think there is just cause for considering that any animal may, by its use, be rendered incompetent for propagating its species. A breeder of some eminence, with a view to an improvement in the condition of his herd, added molasses to the dry food he gave to his stock. It certainly produced the result he anticipated, for their general appearance and condition were most satisfactory; but this was accompanied by an influence he had never expected, for his stock, which had always realized high prices as breeding stock, now, with very few exceptions, proved to be valueless for that object, male and female being alike sterile."

Has any one experimented on human stock in the same way? Fat women are not always sterile, but some are, and many lean women have immense families. **QUERY.**

ERRATA.—In Dr. Dobell's paper on Pancreatin, in the number of December 11th, on page 575, line 6, insert the words "half an ounce of lard" before the words "20 grains." Also, on page 577, line 8, insert "of" before "wasting" and erase "fever" after it.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities and Towns for the week ending January 17, 1874.*

Boston, 133; Worcester, 9; Lowell, 16; Milford, 6; Chelsea, 2; Salem, 6; Lawrence, 14; Springfield, 4; Lynn, 10; Fitchburg, 1; Taunton, 8; Newburyport, 4; Somerville, 7; Fall River, 21; Haverhill, 4; Holyoke, 1. Total, 246.

Prevalent Diseases.—Pneumonia, 37; Consumption, 35; scarlet fever, 21; typhoid fever, 8.

Taunton reports two deaths from smallpox.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Jan. 24th, 140. Males, 68; females, 72. Accident, 3; apoplexy, 1; anaemia, 2; disease of the bladder, 1; bronchitis, 5; inflammation of the brain, 1; congestion of the brain, 1; disease of the brain, 7; burned, 1; cancer, 2; cerebro-spinal meningitis, 2; cyanosis, 2; consumption, 21; convulsions, 6; croup, 1; debility, 1; diarrhoea, 1; dropsy of the brain, 3; drowned, 1; diphtheria, 1; exhaustion, 1; epilepsy, 1; erysipelas, 1; scarlet fever, 14; typhoid fever, 2; gastritis, 2; disease of the heart, 4; white swelling of knee, 1; disease of the kidneys, 3; disease of the liver, 3; congestion of the lungs, 2; inflammation of the lungs, 10; marasmus, 7; noma, 1; old age, 7; paralysis, 3; pleurisy, 1; premature birth, 3; peritonitis, 1; puerperal disease, 1; rheumatism, 1; starvation, 1; teething, 1; tumor, 2; uræmia, 1; whooping cough, 1; unknown, 2.

Under 5 years of age, 52; between 5 and 20 years, 20; between 20 and 40 years, 20; between 40 and 60 years, 23; over 60 years, 25. Born in the United States, 111; Ireland, 21; other places, 8.